

REMARKS/ARGUMENTS

The Applicant originally submitted Claims 1-20 in the application. The Applicant has not amended, canceled or added any claims. Accordingly, Claims 1-20 are currently pending in the application.

I. Rejection of Claims 1-5, 7-12, 14-17 and 19-20 under 35 U.S.C. §102

The Examiner has rejected Claims 1-5, 7-12, 14-17 and 19-20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,459,392 to Mandlecorn. The Applicant respectfully disagrees since Mandlecorn does not teach regulating a current-controlled frequency-modulated power factor corrector having a power switch including detecting a sense current representative of an input current to the power factor corrector and providing a signal that causes at least one of an increase and decrease of a switching frequency of the power switch based on the input current as recited in independent Claims 1, 8 and 15.

Mandlecorn is directed to reducing line conducted electromagnetic interference (EMI) in a pulse-width modulated power factor corrector (PFC) circuit without any need to increase the size of an EMI line filter typically incorporated into PFC circuits. (*See column 1, lines 56-61.*) Mandlecorn discloses a unity power factor power supply including a full wave rectifier 12, a resistor 45, a timing capacitor C100 and a power switch. (*See column 5, lines 35-52 and Figure 2.*) The unity power factor power supply, however, does not provide a signal that causes at least one of an increase and decrease of a switching frequency of the power switch based on an input current thereto. On the contrary, the unity power factor power supply employs the resistor R54 to introduce the voltage of the full wave rectifier 12 across the capacitor C100 to vary the frequency of the power switch.

(See column 5, lines 50-62 and column 6, lines 39-45.) Thus, instead of providing a signal that causes an increase or a decrease of a switching frequency of a power switch based on an input current, Mandlecorn discloses a system for reducing EMI in a switched mode power supply based on the **instantaneous input line voltage**. (See column 1, line 66 to column 2, line 2; column 2, lines 16-27 and Figure 2.) Additionally, Mandlecorn does not teach a sensing circuit that detects a sense current representative of an input current as recited in Claims 1 and 15 but discloses a frequency varying circuit that introduces an input voltage across a capacitor. (See column 5, lines 49-52 and Figure 2.)

Therefore, Mandlecorn does not disclose each and every element of independent Claims 1, 8 and 15 and, as such, is not an anticipating reference of Claims 1, 8 and 15 and Claims dependent thereon. Accordingly, the Applicant respectfully requests the Examiner to withdraw the §102 rejection with respect to Claims 1-5, 7-12, 14-17 and 19-20 and allow issuance thereof.

II. Rejection of Claims 6, 13 and 18 under 35 U.S.C. §103

The Examiner has rejected Claims 6, 13 and 18 under 35 U.S.C. §103(a) as being unpatentable over Mandlecorn in view of U.S. Patent No. 5,793, 623 to Kawashima, *et al.* The Applicant respectfully disagrees.

As discussed above, Mandlecorn does not teach regulating a current-controlled frequency-modulated power factor corrector having a power switch including detecting a sense current representative of an input current to the power factor corrector and providing a signal that causes at least one of an increase and decrease of a switching frequency of the power switch based on the input current as recited in independent Claims 1, 8 and 15. Additionally, Mandlecorn does not

suggest detecting a sense current representative of an input current to the power factor corrector and providing a signal that causes at least one of an increase and decrease of a switching frequency of the power switch based on the input current as recited in independent Claims 1, 8 and 15. Instead, Mandlecorn teaches a unity power factor power supply that varies the frequency of a power switch based on the instantaneous input line voltage. (*See* column 2, lines 1-11 and lines 16-27.) Mandlecorn, therefore, neither teaches nor suggests each and every element of independent Claims 1, 8 and 15.

Kawashima has not been cited to cure the above deficiencies of Mandlecorn but to teach the subject matter of dependent Claims 6, 13 and 20. Additionally, the Applicant does not find where Kawashima cures the deficiencies of Mandlecorn but instead is directed to an air conditioner with an active filter that improves a power factor and suppresses a higher harmonic current from a power source. (*See* column 1, lines 7-10.) Accordingly, the cited combination of Mandlecorn and Kawashima does not teach or suggest each element of independent Claims 1, 8 and 15. Thus, the cited combination does not provide a *prima facie* case of obviousness of Claims 1, 8 and 15 and Claims dependent thereon. The cited combination of Mandlecorn and Kawashima, therefore, does not render dependent Claims 6, 13 and 20 unpatentable. As such, the Applicant respectfully requests the Examiner to withdraw the §103(a) rejection of Claims 6, 13 and 20 and allow issuance thereof.

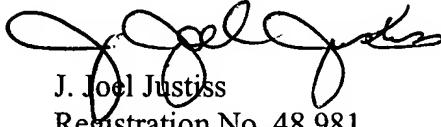
III. Conclusion

In view of the foregoing remarks, the Applicant now sees all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1-20.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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